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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/943,789      | 08/31/2001  | Gregory W. Farrell   | 34423/207670        | 1053             |

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EXAMINER

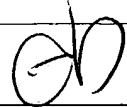
AFTERGUT, JEFF H

| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |   |
|------------------------------|------------------------|---------------------|---|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |   |
|                              | 09/943,789             | FARELL ET AL.       |   |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Jeff H. Aftergut       | 1733                |   |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 21-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11-350255 (newly cited) or E.P. 586,924 (newly cited) and either one of PCT WO 90/13423 or Canadian Patent 2191072 (newly cited).

Japanese Patent '255 and E.P. '924 both suggested the formation of multicomponent fibers which included the formation of fibers which included melt extruding the two different polymers wherein one component of the bicomponent filaments included polypropylene and another component of the multicomponent filament included polyethylene. More specifically, applicant is referred to page 5, lines 3-11 of E.P. '924 and the translation of Japanese Patent '255 at paragraphs [0014] and [0031] where the high melting point polymer was defined as polypropylene and the low melting point polymer defined as polyethylene. The reference suggested that these fibers were formed via melt extruding. Additionally, these reference suggested that subsequent to the extrusion operation and the formation of the nonwoven web from these bicomponent fibers, the web was subjected to an embossing operation with an embossing roller and a anvil or back up smooth roller, see Japanese Patent '255 at paragraph [0052] and the examples and E.P. '924 at page 8, lines 42-47 and the enclosed copy of US Patent 3,855,046 (which suggested that the temperature and pressure applied at the roller nip of the embosser would have been determined as a function of line speed and material being processed, for example). The references failed to teach that those skilled in the art at the time the invention

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was made would have incorporated an embossing roller which included a fluoropolymer coating thereon.

However, in the art of embossing, one skilled in the art at the time the invention was made would have found it obvious at the time the invention was made to incorporate a fluoropolymer coating upon the embossing roller as such would have facilitated the embossing operation by preventing material build up on the embossing roller as well as increased the useful life of the tooling utilized in the embossing operation as suggested by either one of Canadian Patent '072 and PCT '423. Clearly, one versed in the art of embossing would have found it obvious at the time the invention was made to incorporate a fluoropolymer coated embossing roller in the operation of embossing the nonwoven webs of either one of Japanese Patent 11-350255 or E.P. 586,924 wherein such would have increased the life of the embossing roller as well as prevented the build up of materials on the embossing roller as suggested by either one of PCT WO 90/13423 or Canadian Patent 2191072.

It should be noted that the processing temperatures one practiced the embossing operation at would have been determined through routine experimentation as a function of the material of the nonwoven web, the basis weight of the same, as well as the speed of the operation (i.e. at higher speeds one skilled in the art would have readily appreciated a need to operate the embossing equipment at higher temperatures. Note with regard to claim 2, the references to Japanese Patent 11-350255 or E.P. 586,924 suggested the specific bond area in the embossing roll which fell within the specified range. Regarding claim 3, the number of lands on the embossing roll was a function of the amount of area one desired to bond and as such it would have been understood that the number of lands in either one of Japanese Patent 11-350255 or

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E.P. 586,924 would have fallen within the broad range of land area defined. Regarding claims 4 and 11, note that the references suggested a surface coating of the same material as defined by applicant (a fluoropolymer) on a steel embossing roll. As such, one skilled in the art would have expected that the hardness would have been the same. Regarding claim 5, note that the embossing of either one of Japanese Patent 11-350255 or E.P. 586,924 included a smooth anvil roll and an embossing roll. Regarding claim 6, the references to either one of PCT WO 90/13423 or Canadian Patent 2191072 suggested that one skilled in the art would have completely coated the roller of the arrangement including the recesses and raised portion of the roll. Regarding claims 7-9 and 15-19, the prior art suggested that one skilled in the art would have formed filaments via melt extrusion of the same type as defined by applicant with the same polymer materials employed by applicant. Regarding claim 10, note that the concentration of lands per unit area was a function of the degree of bonding one wished to attain and that the references to either one of Japanese Patent 11-350255 or E.P. 586,924 suggested the percent of bond area achieved. It would have been within the purview of the ordinary artisan in the design of the embossing roller to select a raised concentration of lands within the specified range. Regarding claims 12 and 14, the references to PCT WO 90/13423 or Canadian Patent 2191072 suggested the specified coatings. Regarding claims 13 and 19, the references suggested embossing a nonwoven at the specified temperatures and pressures and such would have been determined based upon the specific nonwoven, the desired characteristics one wished to attain from the same, and the line speed of manufacture for example. Regarding claim 21, the prior art to PCT WO 90/13423 or Canadian Patent 2191072 suggested the specified coating on the embossing roller.

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*Election/Restrictions*

3. Applicant's election of Group I, claims 1-20 in the response dated 2-4-04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

4. Claims 21-36 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the response dated 2-4-04.

*Response to Amendment*

5. The declaration by Jay Darrell Gillespie under 37 CFR 1.132 filed 2-4-04 is insufficient to overcome the rejection of claims 1-20 based upon the prior art as set forth above because the claims at hand are not commensurate in scope with the showings. Namely, the declaration suggested that the use of the fluoropolymer coated embossing roller enabled one to process the nonwoven over a larger window of temperatures including higher temperatures for the embossing roller than were previously able to be attained. At these higher processing temperatures, the declarant stated that unexpectedly there was an increase in tensile strength properties in both machine and cross machine direction and an increase in abrasion resistance without altering significantly the softness of the finished nonwoven web. Declarant is advised that it appears the unexpected results were a function the ability to process (emboss) the web at a higher temperature (which declarant suggests is only possible with the specified coated embossing roll). However, the claims at hand do not express the operation of the embossing rollers at the specified temperatures and thus the claims are not commensurate in scope with the

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unexpected results. Additionally, declarant is advised that one skilled in the art would have additionally understood that the embossing rollers would have been capable of operation at higher temperatures as a function of the speed of the embossing operation as evidenced by Lurken (the article entitled "The Significance of the Calendar In the Production of Nonwovens With Special Regard to Thermobonding" from Nonwovens Industry) where as described on page 72 the embossing rollers were known to have been operated at temperatures up to 185 degrees C (or 365 degrees F) as a function of the speed of the nonwoven web passing over the embossing device. Clearly, one skilled in the art would have understood that operation of the calendar at temperatures above 265 degrees F would have been possible dependent upon the speed of fabrication (higher speeds require higher temperatures of operation). Note additionally that Hansen (US Patent 3,855,046 which was expressed in EP '924 as the useful embossing operation) suggested embossing roller temperatures of 275-350 degrees F, see column 6, lines 16-29.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that the prior art previously applied failed to teach that one skilled in the art at the time the invention was made would have melt extruded to form the filaments of the nonwoven. The applicant is advised that the prior art of as applied above suggested that one skilled in the art at the time the invention was made would have melt extruded the filaments followed by passing the nonwoven webs through an embossing operation to achieve a finished nonwoven web with the desired properties.

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The applicant additionally is advised that the claims at hand are not commensurate in scope with the showings of the declaration as noted above. It would appear that what was unexpected was the ability to achieve the specified improvements in tensile strength and abrasion resistance at the higher processing temperatures, however the claims at hand are not limited to the specified processing parameters. Additionally, as noted above, it would appear that operation of the embosser at higher temperatures (than 265 degrees F) was well within the purview of the ordinary artisan as a function of line speed and materials being processed as evidenced by Hansen and Lurken.

#### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeff H. Aftergut



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Primary Examiner  
Art Unit 1733

JHA  
March 25, 2004